

FIGURE 3 shows an exploded cross-sectional view of the radiation detector module of FIGURE 2.

FIGURE 4 shows a top view of the radiation shield and feedthroughs of the radiation detector module of FIGURE 3.

5 FIGURE 5 shows cross-section A-A indicated in FIGURE 4.

FIGURE 6 shows a cross-sectional view of a radiation detector module that is similar to that of FIGURES 2-5. In the detector module of FIGURE 6, the feedthroughs are secured to a printed circuit board or ceramic substrate that supports processing electronics.

10 FIGURE 7 shows the an exploded cross-sectional view of the radiation detector module of FIGURE 6 with the scintillator and the detector array omitted.

FIGURE 8 shows a portion of a radiation shield in which insulated feedthroughs are press-fitted into openings of the radiation shield.

FIGURE 9 shows a portion of a radiation shield in which feedthroughs are press-fitted into insulated openings of the radiation shield.

15 FIGURE 10 shows a portion of a radiation shield in which feedthroughs are press-fitted into insulating inserts disposed in openings of the radiation shield.

FIGURE 11 shows a cross-sectional view of a radiation detector module that is similar to that of FIGURES 2-5. In the detector module of FIGURE 11, insulated feedthroughs are embedded in a conductive radiation shield.

20 FIGURE 12 shows a cross-sectional view of the radiation shield and embedded feedthroughs of the radiation detector module of FIGURE 11.

FIGURE ¹³~~8~~ shows an extrusion including an insulating radiation shield material co-extruded about electrical conductors. The extrusion is suitably sliced perpendicular to or at an angle to an extrusion direction to produce a radiation shield with embedded feedthroughs.

25 FIGURE 14 shows a cross-sectional view of a radiation shield with embedded high-Z feedthroughs constructed from a perpendicular slice of the extrusion of FIGURE 13.

FIGURE 15 shows a cross-sectional view of a radiation shield with embedded slanted low-Z feedthroughs constructed from slanted slice of the extrusion of FIGURE 13.

30 FIGURE 16 shows a cross-sectional view of a radiation detector module that is similar to that of FIGURES 2-5. In the detector module of FIGURE 16, the radiation shield includes two shield portions with laterally offset low-Z feedthroughs.